TO

THE TRULY NOBLE PHILOSOPHER,

ROBERT BOYLE Esq;

Brother to the Right Hononrable the *Earl of Burlington*, &c.

SIR,

I *Cannot forbear any longer to addreſs one of the Volumes of theſe* Tranſactions *to You, to whom I moſt willingly profeſs I am ſincerely devoted, and who is known to have obliged the learned World with ſo many uncommon Diſcoveries in Nature, and ſo ſolidly maintain'd the Power and Uſefulneſs of Experimental Philoſophy. And this I do by offering you* this *Volume, becauſe in it (beſides other parcels of not ordinary remark elſewhere interſperſed) two of the Twelve Tracts are almoſt entirely your own; of which the judicious do generally affirm, that though they are draughts written only for your own memory, and have not yet the poliſhing of your laſt hand, yet they contain moſt diving Reſearches into ſome of the deepeſt Receſſes of Nature, that ever appear'd in Publick; and have moſt induſtriouſly examin'd the Breath and Fuel of Life, the State of Air, and Water,*

in

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in the various degrees of Rarity and Denſity, Weight, and Abſence, longer or ſhorter, for the Reſpiration *of Animals; And have left us manifeſt evidences of the neceſſary Weight, and other enforcements of Air, to preſerve us from Suffocations and Convulſions; And that neither common Liquids can raiſe their Uſual Steams, nor the minuteſt Inſects continue their Motion even whilſt they retain life, without the Preſence and Help of Air.*

And yet I may be asked, what Patronage, what Heroe, or what Genius *can give ſafe guard againſt the malicious ſcurrility of many of this Age, who attempt to deface every vertue, and whatſoever is excellent, and particularly that which is moſt obliging to the Publick? To this diſcouragement I reply cheerfully, that the malicious and ſcurrilous are ſhort-liv'd, and will ſoon expire in an odious ſnuff, or will haſten to hide themſelves in ſhame and confuſion: But* Truth *is mighty and will prevail;* Wiſedome *will be juſtifi'd;* Vertue *will in good time emerge;* Knowledge *will abound;* Arts *will flouriſh; and* Poſterity *will applaud them, from whom they receive the cleereſt Light and the beſt Accommodations.*

I am inform'd by ſuch as may well remember the beſt and worſt days of the Famous Lord Bacon; *That though he wrote his* Advancement of Learning, *and his* Inſtauratio Magna, *and many other elaborate Treatiſes of Philoſophy, in the time of his greateſt power; yet his greateſt Reputation rebounded firſt from the moſt Intelligent Forraigners in many parts of Chriſtendome: It cannot be doubted, but that* England *had then better knowledge of the abſtruſities, many troubles and burthens of our Municipal Laws, and Chancery, which lay long and much upon his ſhoulders; And that he bore the ſtreſs of State affairs in almoſt all King* James's *days, and in Queen* Elizabeth's *later days; That he adorned the ſolemn Addreſſes, and was the Extra-ordinary Pen-man for moſt Apologies, Deliberations, and graveſt Adviſo's in Parliaments, and otherwiſe: Here they ſaw alſo, How he excelled in the beſt Theology of that Age, and in the Politeſt of Civil and Moral Eſſays: And therefore here they might juſtly wonder, how a perſon ſo publickly immerſed in all Civil Intereſts ſhould find leiſure to do any thing at all in* Philoſophy: *And much more juſtly may we ſtill wonder, how, without any great skill in Chymiſtry, without much pretence to the Mathematicks or Mechanicks, without Optick Ayds, or other Engins of later Invention, he ſhould ſo much tranſcend*

ſcend the Philoſophers, then living, in judicious and clear inſtructions, in ſo many uſeful Obſervations and Diſcoveries; I think, I may ſay beyond the Records of many Ages. Hence, and from all this I would infer, that all Mortals muſt wait for their juſt renown poſt cineres, *after their mortality; and that Envy lyes cloſe at the doors, and purſues great merit to the laſt ſtages of life.*

Sir, As the Greek Poet fetch'd in Caſtor *and* Pollux *for his higheſt applauſes, when he had another concernment in his chief aim; ſo, that I may not by any Temptation put your Modeſty to a bluſh, I muſt continue to diſcourſe of the Lord* Bacon, Gilbert, des-Cartes, Gaſſendus, *and others the Miracles of modern and revived Philoſophy; of the indefatigable induſtry of ſome; the ingenious Contrivances of others; and of many their ſucceſsful performances. And truly 'tis to me very ſtrange, that ſeveral of theſe Excellent perſons have ſo luckily eſpouſed thoſe* Hypotheſes *of Nature in many true particulars, which* You *have by manifeſt Experiments evinced and confirm'd; as if by an eſpecial bleſſing upon their Labors, and for their good Affections towards Man-kind, they had been guided by an Heavenly Ray to divine, what would be the Reſult from diligent Tryals.*

And, ſince a noyſe hath been raiſed by temerarious Cenſurers againſt you, as if you were too indulgent to the old Atomiſts, *I hold my ſelf bound in Juſtice, to take publick notice of your impartiality, that you were neither led aſide on the one hand by the addiction to* Chymiſts, *to favour their Principles above truth; nor on the other hand, deterr'd by the Heathenish miſtakes about* Atoms; *nor by the Vulgar notions of the* Elements, *from giving due place to the* Corpuſcularians (*ſo far as they might have Truth on their ſides*) *even by the Aſſiſtance of* Chymiſtry, *as you have done moſt candidly in your* Sceptical Chymiſt, *and in your* Origine of Forms and Qualities.

And now Sir, this would look more like a neglectful Omiſſion of due Reſpects, than a juſt Addreſs, if I ſhould forbear to acknowledge, that you have ſo coherently deduced, and ſo conſpicuouſly illuſtrated the General, and the leſs Obvious Proceſſes of Nature in her Occult and ſubtile Influences, Whether Atmoſphærical, *or more remotely* Coſmical; *Whether* Celeſtial, Æthereal, *or* Aereal; *Whether* Subterraneous *or deſcending; Whether of Air, or any known kind of Water, Liquids, or Menſtruous; Spirituous,*

or

or in ſome degree Incraſſated; their Hydroſtatical tendency, Weight, or State; that it muſt give abundant ſatisfaction to future Ages, eaſe them of much pains, and allow them the more leiſure and manifold Aſſiſtances for further Proceſſes. I muſt add, that in the Treatiſes of Firmneſs *and* Fluidity *of* Cold, *and the* Thermoſcopical *Meaſures of Warmth and Frigidity, of* Colours *and* Light, *you have given us good ground for our Reſt, and for a fair proſpect into the Labyrinths of* Nature. *Beſides, I muſt take the freedom to ask, Who did ever ſuſpect the Ambient Air of having ſuch a force to conſolidate firmneſs in ſtubborn and unflexible Bodies, as you have ſhew'd it to have? Who ſuſpected, that Air (the pureſt we can obtain ſo near the ſurface of the Earth) ſhould ſo widely* Expand *it ſelf when at ſome liberty; or ſhould endure ſuch Mechanical* Compreſſions? *That the moſt* Solid *Bodies we have amongſt us ſhould emit ſpacious Atmoſpheres; and that the parts of our firmeſt Rocks and Jewels are not in an* abſolute *Reſt in their long laſting duration? What divining Imagination or Conjecture did admit of all theſe points for ſound Philoſophy, till you taught us to feel it in our Scales, and to ſee it with our Eyes?*

But I muſt not here heap up together your many coſtly and aſſiduous Labours: I muſt ſtop my Pen, and conſider more what your Ears can bear, than what is due to your Merit. Only this I muſt here avouch, as one amongſt a great number of good Witneſſes, that many of the moſt learned Forrainers (to ſay nothing now of worthy Engliſhmen) do ſo highly value all the Treatiſes you have publiſhed, that they do importunately deſire, your Desks were forthwith emptied into the publick Light, and carefully rendred into their known Languages.

Sir, all that value true Worth and true Philoſophie, are bound to pray for the Recoverie of your Health and Strength, and for your long Life, and perpetual Increaſe in all Happineſs. So does he, who eſteems the moſt uſeful things in Human Societie, to be Knowledge *and* Vertue, (*combined in you,*) *and who is*

SIR,

Your very Humble and Faithful Servant,

HENR. OLDENBURG Soc. Reg. Secr.